



Soil quality: a step back in land evaluation

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Introduction

- “Soil quality” has substituted for “land evaluation”
- Without any discussion about the pros/cons

The abandonment of the “land” concept

- The term “soil quality” is misleading:
 - some systems also include “land” characteristics
 - other systems take a very narrow view of soils
- But:
 - “dynamic” soil properties are deeply related to “inherent” properties
 - “land” characteristics have an overwhelming effect on:
 - land use decisions
 - the performance of the LUS

The neglect of land use

- Confusion in considering inputs/outputs of the LUS as indicators
- Comparison of some soil variables either:
 - among broad land-uses, or
 - various management systems for the same crop or rotation
- Objective of SQ:
capacity of soil for use or effects of use on soil ?

The neglect of land use

- Land-use is much more than technology:
 - the evaluation criteria should include the constraints and performance objectives of:
 - farmer
 - land use policies at various scales

Subjectivity in evaluating SQ

- Reliance on:
 - expert opinion
 - “statistical opinion”
- No explicit analysis of the relation between indicators, target ranges, or SQ indices on performance objectives, goals, or constraints

The neglect of sustainability assessment

- SQ assessments are not explicit about sustainability:
 - lost in the final SQ index,
 - “dynamic” soil properties recover very quickly
- The reasons for (un)sustainability cannot be defined without:
 - input/output analysis
 - socio-economic context of the land-use

What is the final product ?

- SQ indices (as any other integrative index):
 - hide the truly useful (non-aggregated) information
 - imply a (subjective) value judgement

Conclusions

- SQ represents a step back in the analysis of the relations between soils and land-uses:
 - to land capability / parametric systems
 - to “purely” pedological approaches
- Are we really serious about :
 - reading literature from other schools of Soil Science ?
 - transdisciplinarity outside Soil Science ?